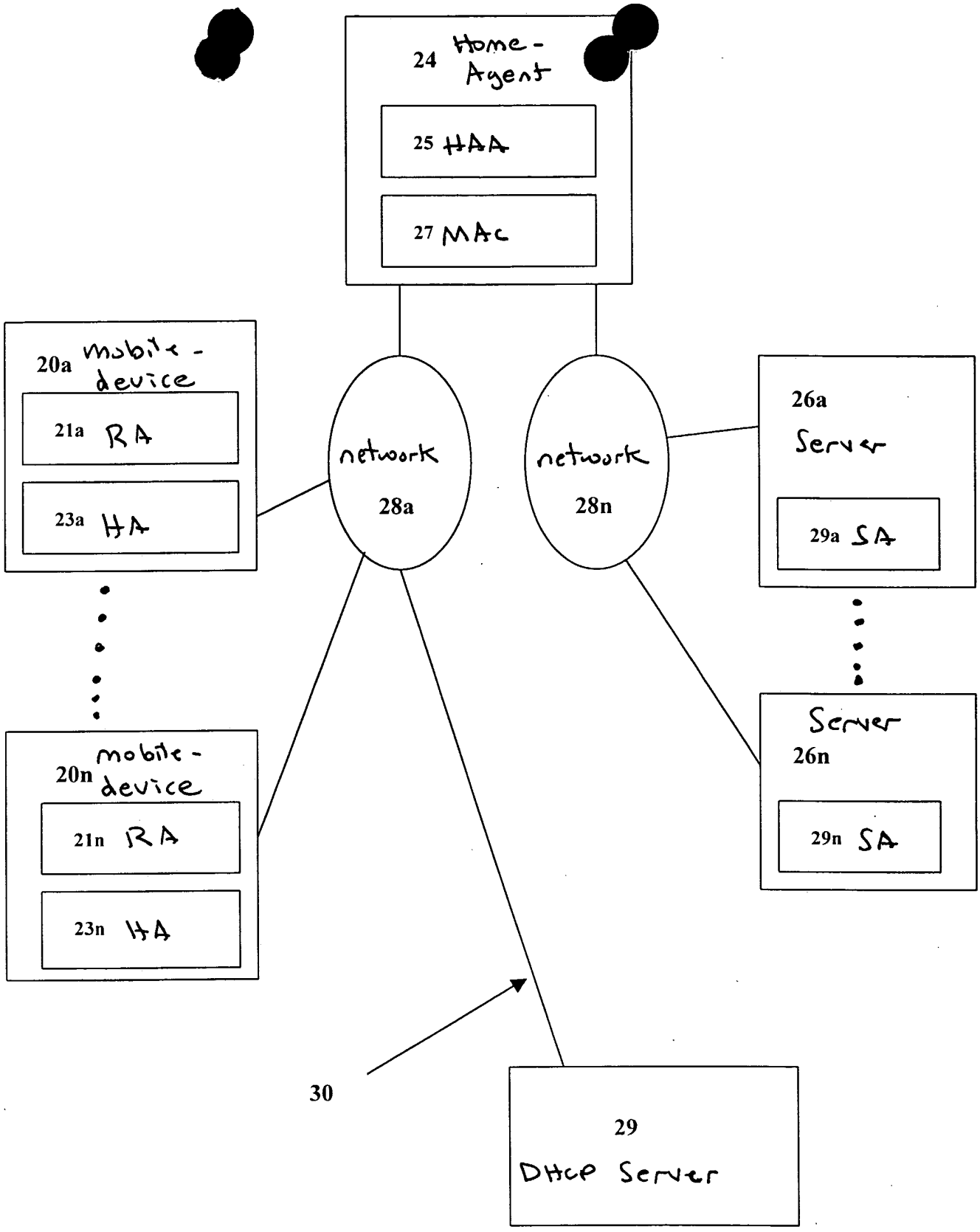

24 Home-Agent
25 HAA
27 MAc
20a mobile-device
21a RA
23a HA
20n mobile-device
21n RA
23n HA
network 28a
network 28n
26a Server
29a SA
Server 26n
29n SA
30
29 DHCP Server

FIG. 1

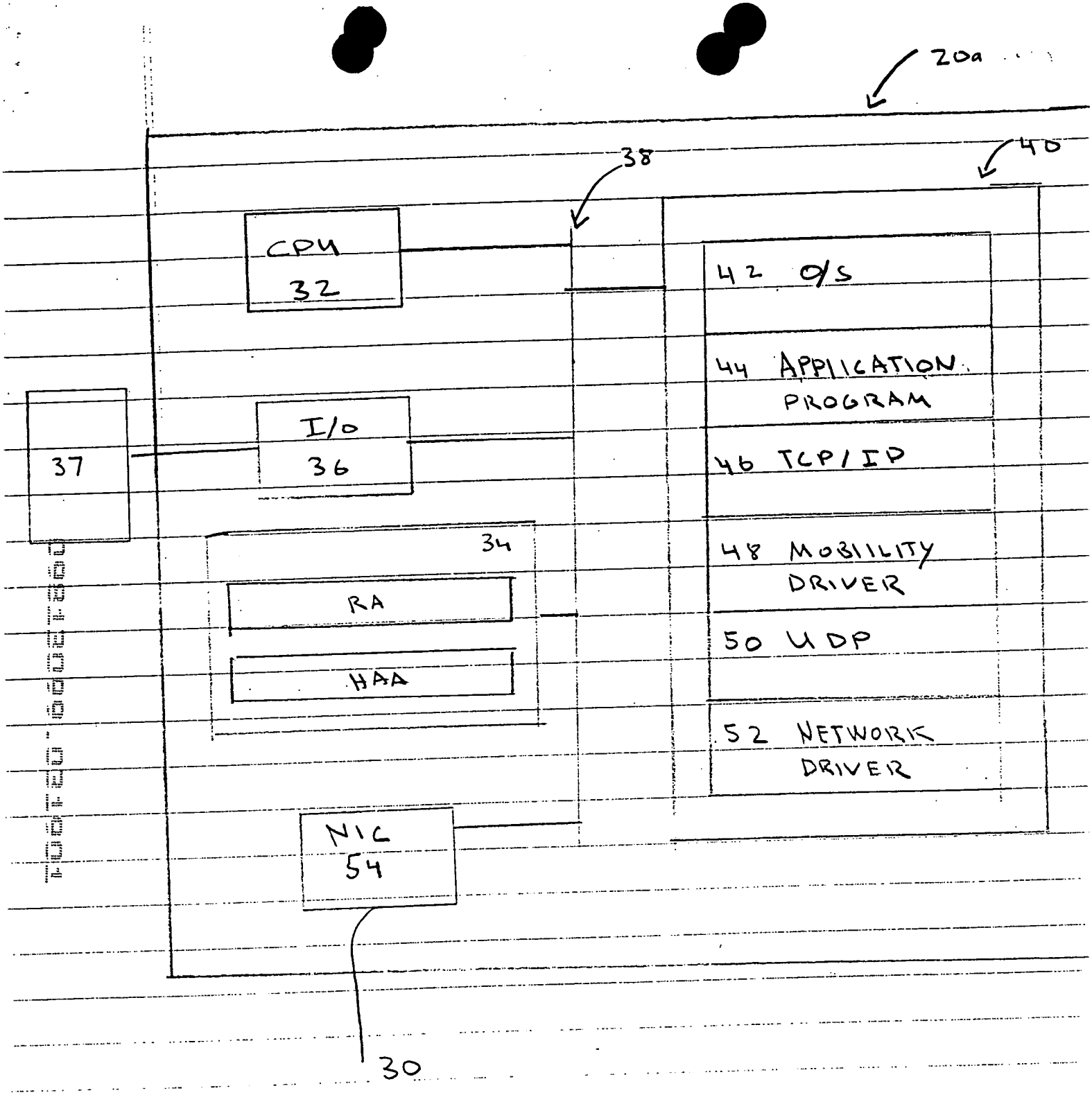

20a
38
40
CPU
32
42 O/S
44 APPLICATION PROGRAM
46 TCP/IP
37
I/O
36
34
48 MOBILITY DRIVER
RA
50 UDP
HAA
52 NETWORK DRIVER
NIC
54
30

Fig 2

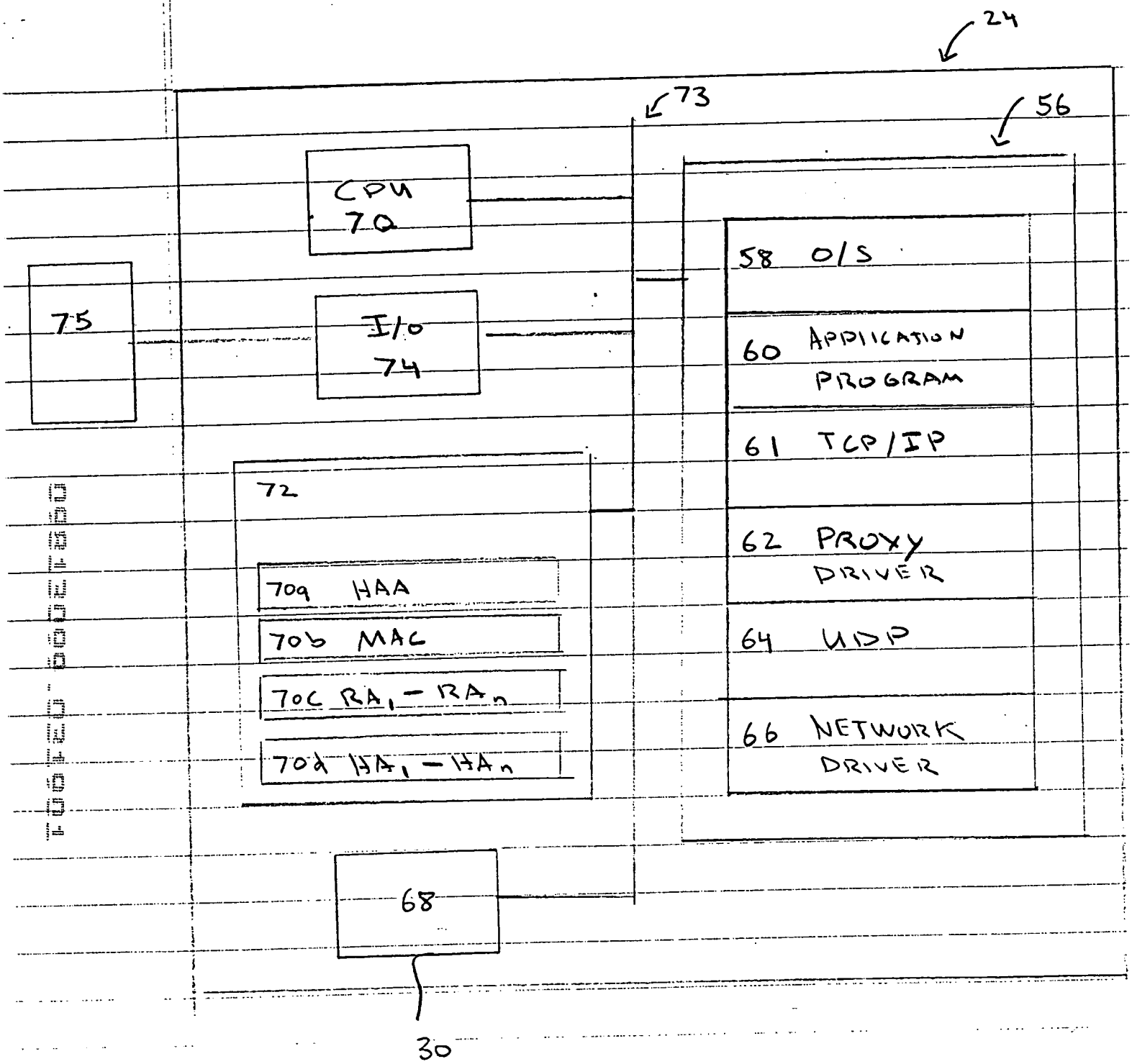

24
73
56
CPU
70
75
I/O
74
58 O/S
60 APPLICATION PROGRAM
61 TCP/IP
72
62 PROXY DRIVER
70a HAA
70b MAC
70c RA1 - RAn
70d HA1 - HAn
64 UDP
66 NETWORK DRIVER
68
30

FIG. 3

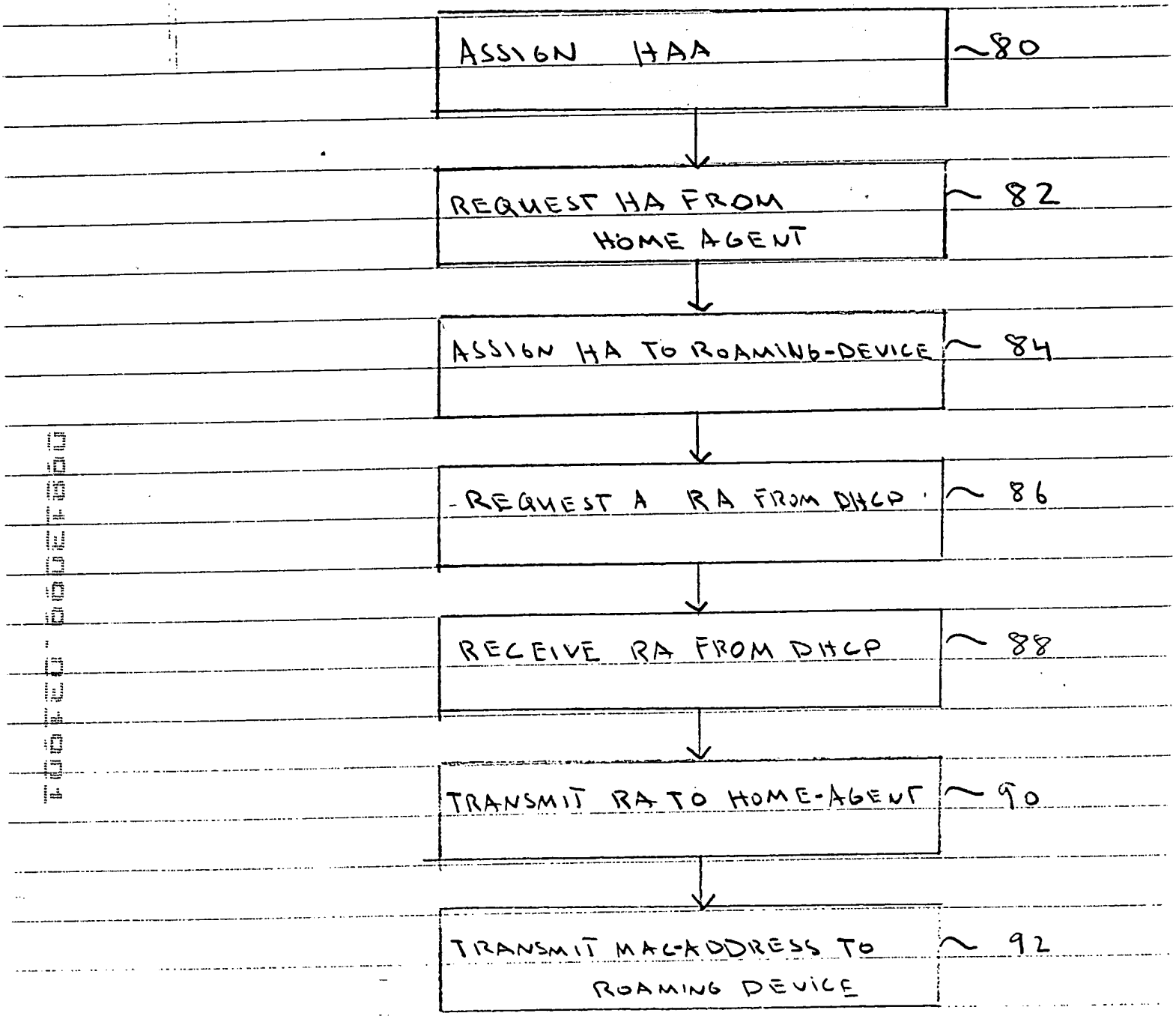

ASSIGN HAA
80
REQUEST HA FROM HOME AGENT
82
ASSIGN HA TO ROAMING-DEVICE
84
REQUEST A RA FROM DHCP
86
RECEIVE RA FROM DHCP
88
TRANSMIT RA TO HOME-AGENT
90
TRANSMIT MAC-ADDRESS TO ROAMING DEVICE
92

Fig. 4

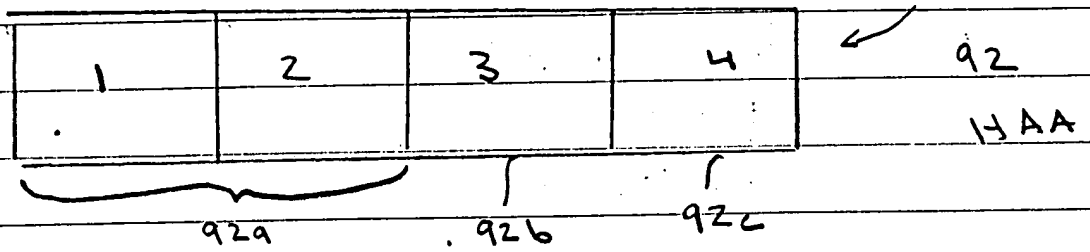


FIG. 5A

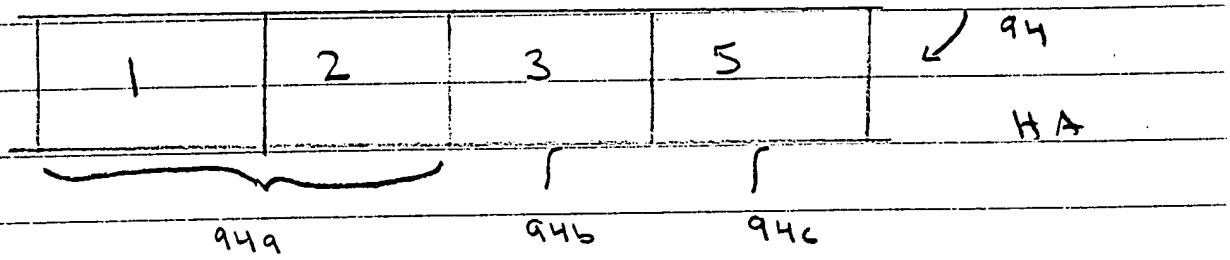


FIG. 5B

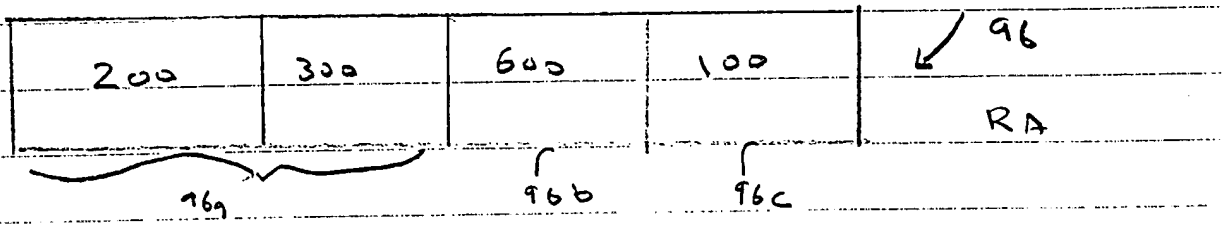


FIG. 5C

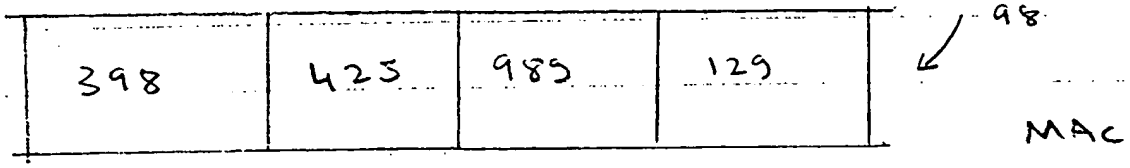


FIG. 5D

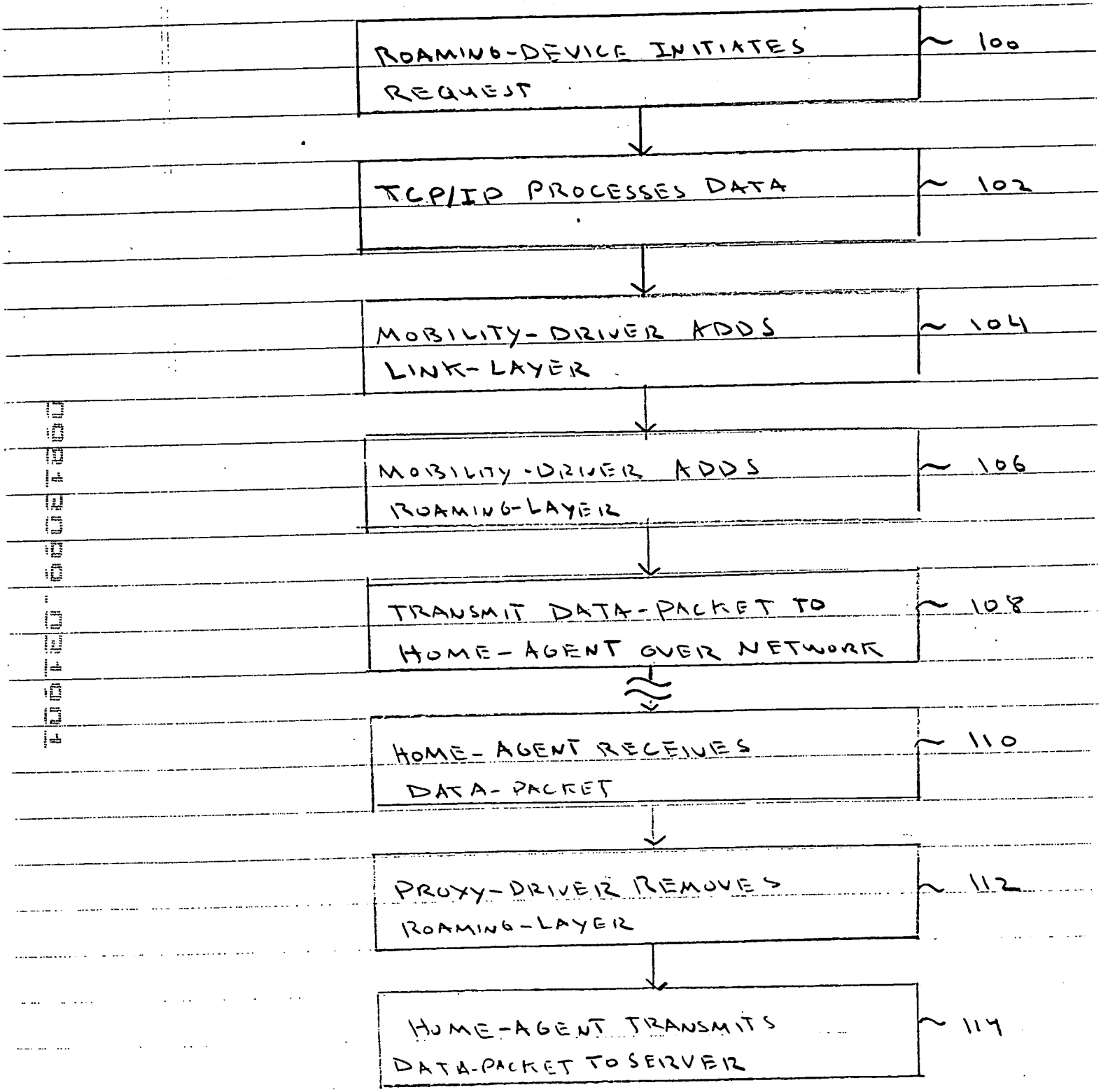

ROAMING-DEVICE INITIATES REQUEST
100
TCP/IP PROCESSES DATA
102
MOBILITY-DRIVER ADDS LINK-LAYER
104
MOBILITY-DRIVER ADDS ROAMING-LAYER
106
TRANSMIT DATA-PACKET TO HOME-AGENT OVER NETWORK
108
HOME-AGENT RECEIVES DATA-PACKET
110
PROXY-DRIVER REMOVES ROAMING-LAYER
112
HOME-AGENT TRANSMITS DATA-PACKET TO SERVER
114

FIG. 6

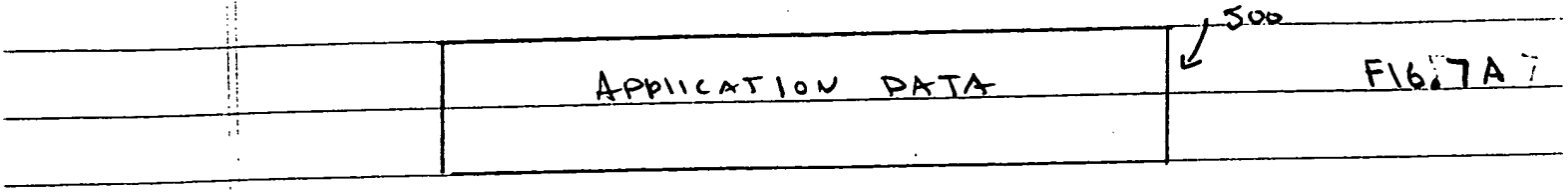


FIG. 7A

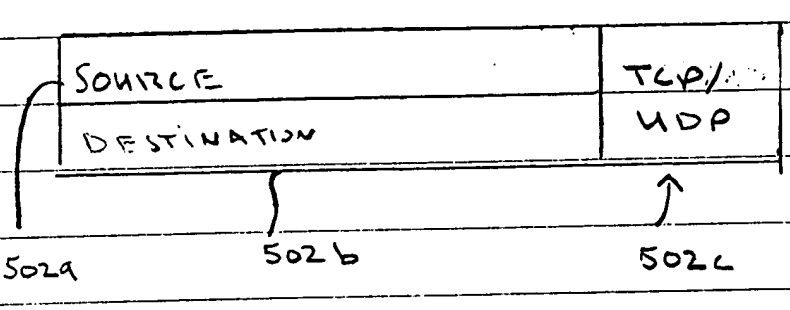


FIG. 7B

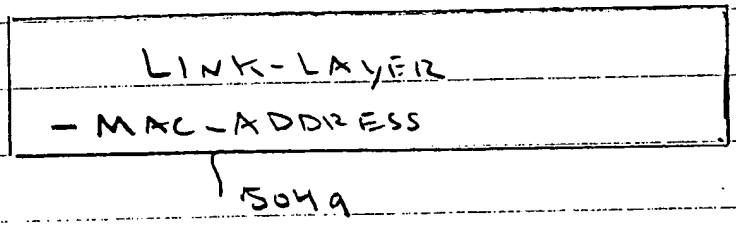


FIG. 7C

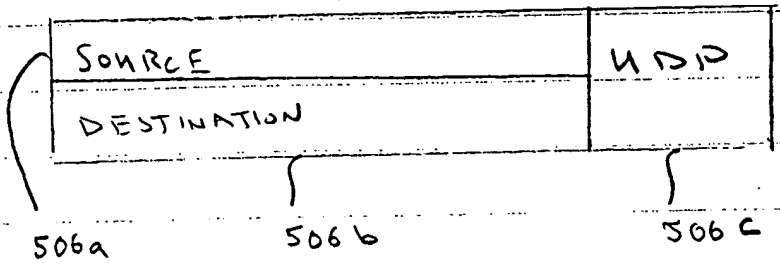


FIG. 7D

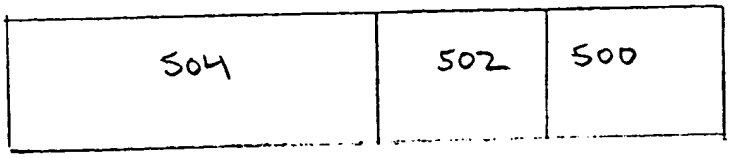


FIG. 7E

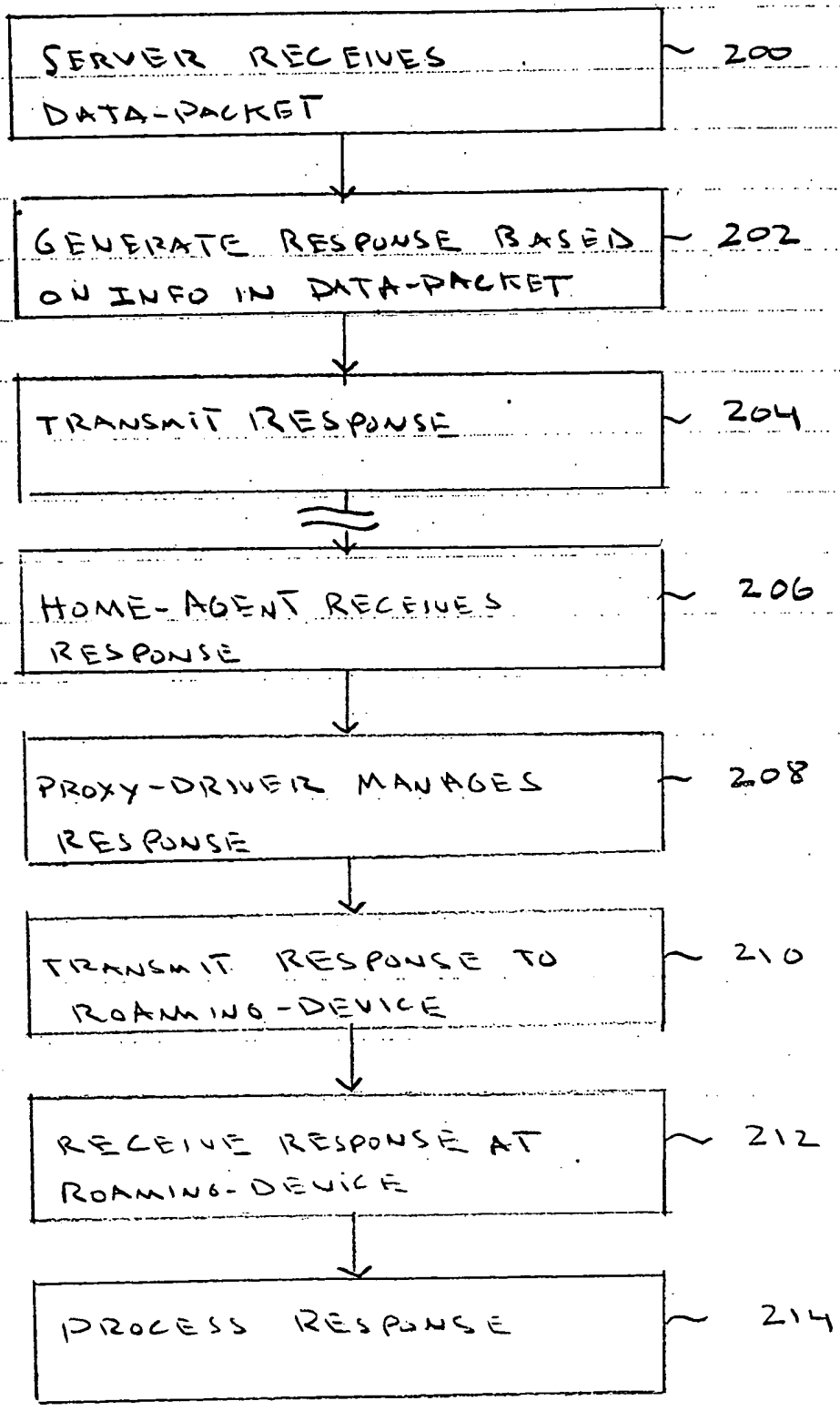

SERVER RECEIVES DATA-PACKET
200
GENERATE RESPONSE BASED ON INFO IN DATA-PACKET
202
TRANSMIT RESPONSE
204
HOME-AGENT RECEIVES RESPONSE
206
PROXY-DRIVER MANAGES RESPONSE
208
TRANSMIT RESPONSE TO ROAMING-DEVICE
210
RECEIVE RESPONSE AT ROAMING-DEVICE
212
PROCESS RESPONSE
214

FIG. 8

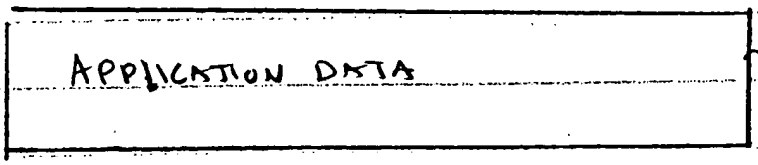


FIG. 9A

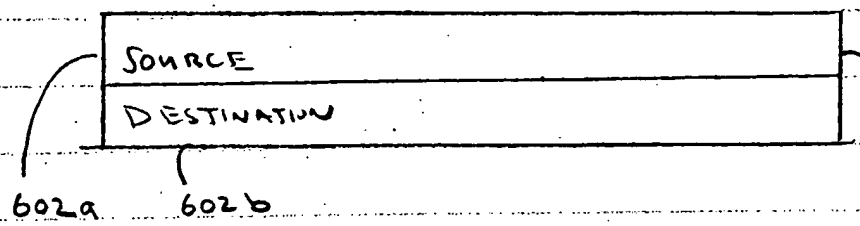


FIG. 9B

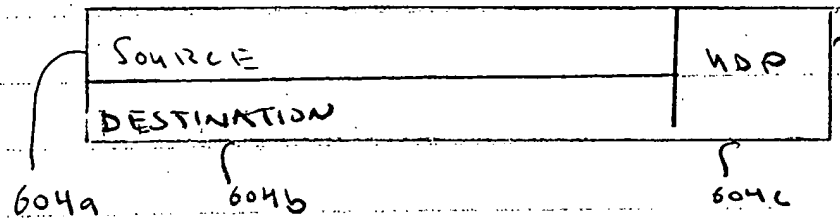


FIG. 9C

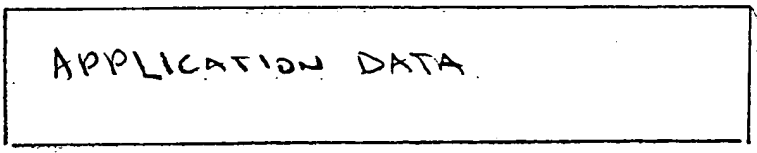


FIG. 9D

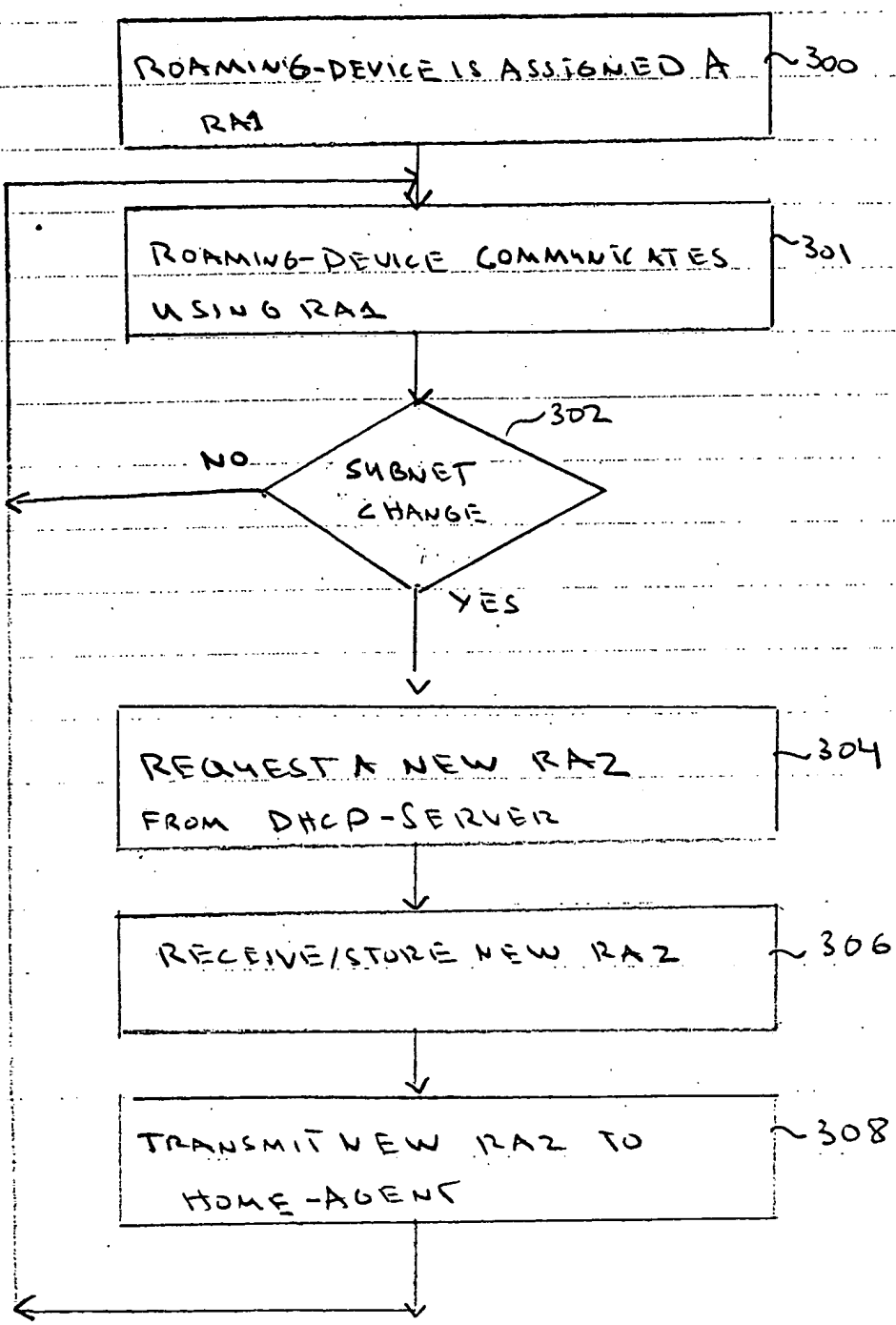

ROAMING-DEVICE IS ASSIGNED A RA1
300
ROAMING-DEVICE COMMUNICATES USING RA1
301
302
SUBNET CHANGE
NO
YES
REQUEST A NEW RA2 FROM DHCP-SERVER
304
RECEIVE/STORE NEW RA2
306
TRANSMIT NEW RA2 TO HOME-AGENT
308

FIG. 10

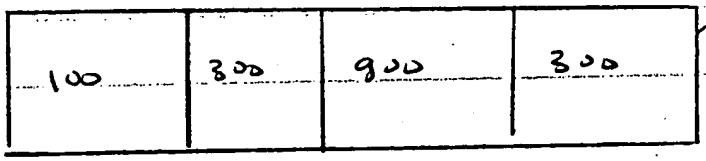
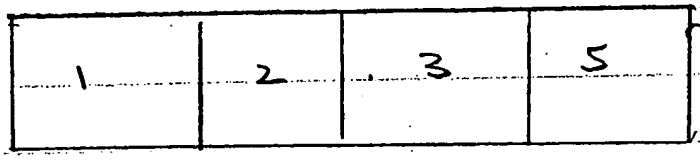


FIG. 11A



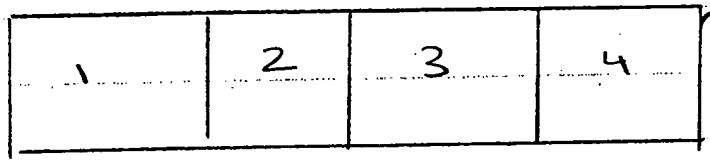


FIG. 11B

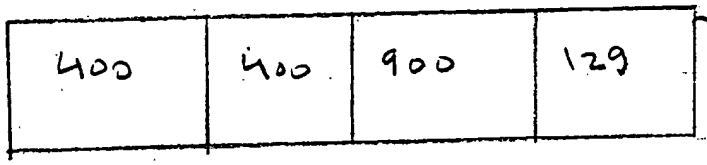


FIG. 11C